TD00060678C1

A1

Service Manual

Radio Cassette

RQ-SW44V

Stereo Radio Cassette PlayerAR66 Mechanism Series

Colour

(Y).....Yellow Type

(A).....Blue Type

(K).....Black Type

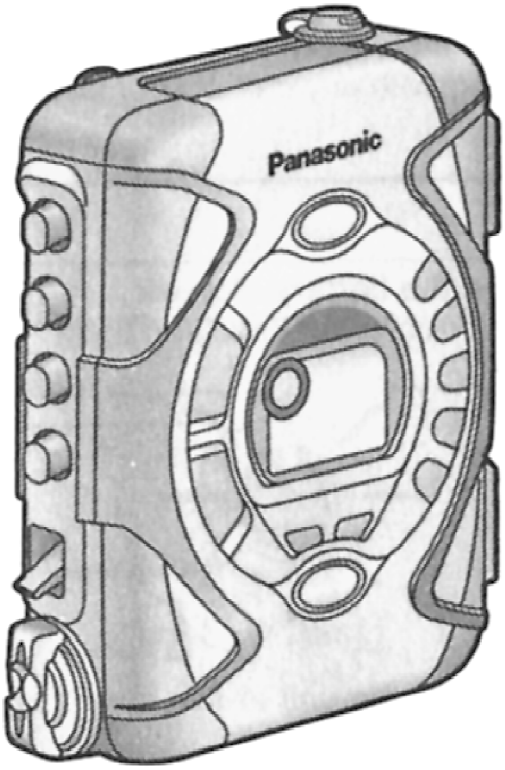
(S).....Silver Type

Area

(P).....U.S.A.

(PC).....Canada.

(PY).....Maxico.



SPECIFICATIONS

SPECIFICATION

General

Power Requirement:	Battery; DC 1.5V (One R6/LR6,"AA",UM-3 Battery)
Power output:	16mW (8 x 2)...RMS (max)
Output:	Headphone;32Ω,∅ 3.5
Dimensions:	90.9(W) x 117.7(H) x 37.4(D)mm (3 9/16" x 4 5/8" x 1 1/2")
Weight:	253g (8.9 oz.) Without battery

Tape Deck Section:

Frequency Response:	40~16,000Hz (Normal) (-6dB)
Tape Speed:	4.8cm/s (1 7/8")
Program Time:	1 hour with C-60 cassette tape
Track System:	4-track, 2-channel stereo playback
Wow & Flutter:	0.15 % (WRMS)

Radio Section:

Radio Frequency Range:	FM; 87.9 ~ 107.9MHz (0.2MHz steps) 87.5 ~ 108.0MHz (0.1MHz/0.05MHz steps)
	AM; 520 ~ 1710kHz (10kHz steps) 522 ~ 1629kHz (9kHz steps)
Intermediate Frequency:	FM; 10.7MHz
	AM; 450 kHz
Sensitivity:	FM; 5.01 µV/0.1 mW output (-3dB Limit, Sens)
	AM; 1000 µV/mV/0.1mW output (MAX,Sens)

Notes:

1.Weights and dimensions shown are approximate.

2.Design and specifications are subject to change without notice.

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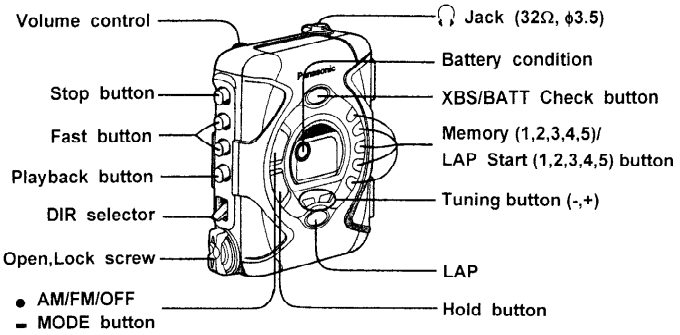
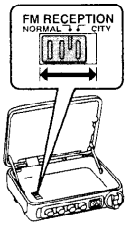
⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public.
It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product.
Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

Panasonic®

1. Location of Controls





BATTERY SERVICE LIFE

UM-3(AA-size) Batteries
Approx. 24 hours of playback (EIAJ) with volume set at 3/4 position
Approx. 28 hours of Radio (EIAJ) with volume set at 3/4 position
The above battery service life is measured according to the conditions set forth by EIAJ (Electronic industries Association of japan). As the battery service life varies with the method of operation and envirommental conditions, use these values as reference.

2. Disassembly Instructions

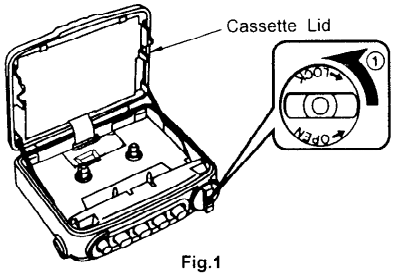


Fig.1

■ Remove of the cassette Lid

- Open the cassette Lid in the direction of arrow ① . (See Fig.1).
- Remove the screws (A) X 2 (See Fig.2).
- Remove the screws (B) X 2 (See Fig.3).

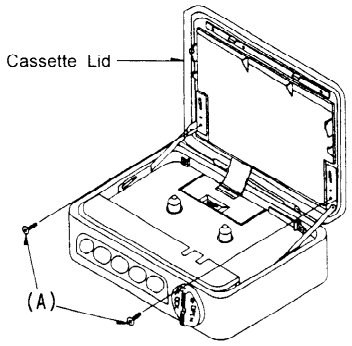


Fig.2

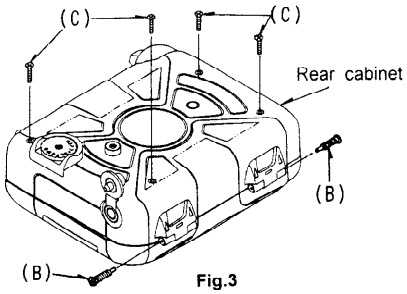


Fig.3

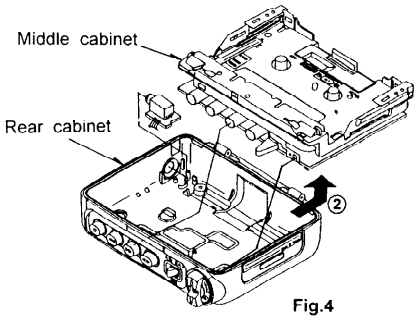


Fig.4

■ Removal of the Rear Cabinet

- Remove the screws (C) (2 X 10)X 4 (See Fig.3).
- Remove the rear cabinet in the direction of arrow ② . (See Fig.4).

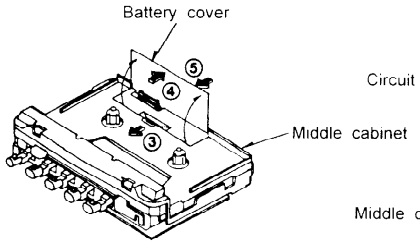


Fig.5

■ Removal of the Battery Cover.

- Open the battery cover in the direction of arrow ③. (See Fig.5).
- Remove the battery cover in the direction of arrow arrow ④ and ⑤. (See Fig.5).

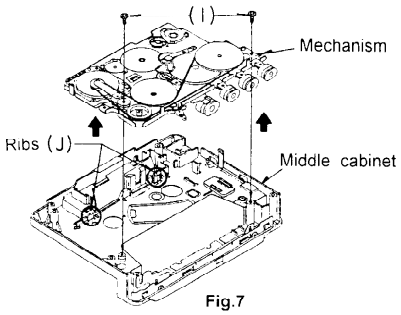


Fig.7

■ Removal of the Mechanism and Middle Cabinte (See Fig.7).

- Remove the deck screws (I) (2X6)mm x 2.
- Remove the Ribs (J).
- Remove the mechanism and middle cabinet.

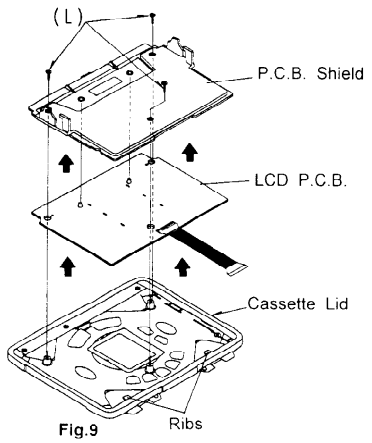


Fig.9

■ Removal of the P.C.B. Shield and LCD P.C.B. (See Fig.9).

- Remove the screws (L) (1.4X4.5)mm x 3.
- Remove the PCB Shield and LCD P.C.B.

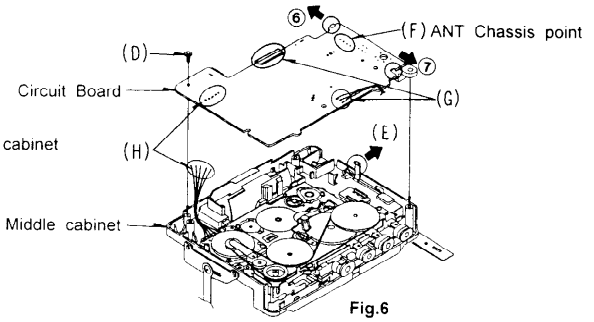


Fig.6

■ Removal of ANT Chassis and Circuit Board (See Fig.6).

- Remove the screw (D) (1.4X4.5)mm x 1.
- Remove the Rib (E).
- Disconnect the solder (F).
- Remove the ANT chassis in the direction of arrow ⑥& ⑦.
- Remove the solder (G). (H). from flexible P.C.B.

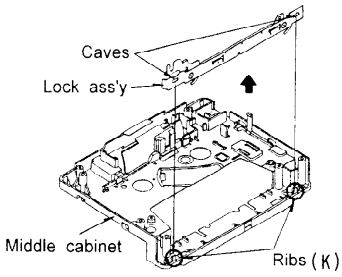


Fig.8

■ Removal of the Lock ass'y (See Fig.8).

- Remove the Ribs (K).

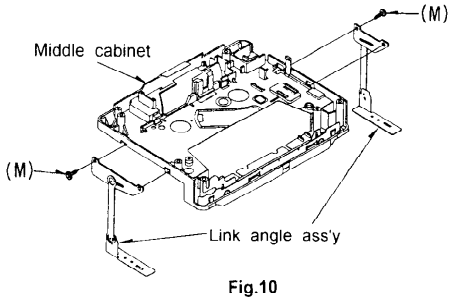


Fig.10

■ Removal of the link angle ass'y (See Fig.10).

- Remove the screws (M) (1.4 X 2) X 2.

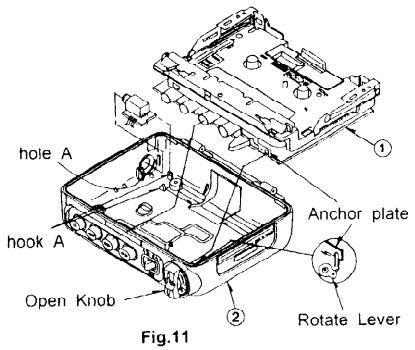


Fig.11

■ **Notice for assembling the mid-cabinet (See Fig.11).**

- In advance insert the earphone jack into hole A, and then press the earphone PCB to hook A to fix it.
- Slant ① about 45 and put it into ②, then fix these five deck buttons onto ②

Notes:

- When put the mid-cover, the H.P wire must be folded and be placed under the main PCB flattly.
- Before put the mid-cover, the anchor plate must be pushed to the right side.
- The open knob must be on open condition.

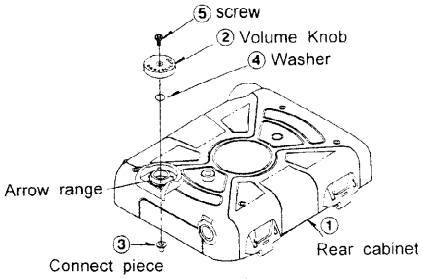


Fig.12

■ **Notice for assembling the Volume Knob (See Fig.12).**

1.Put ④ on ① and then lay grease on it, and assembled ③ and ②,finally tighten them with screw ⑤.

Notes:

1.The ② has a tab inside, it should be placed inside the arrow range.

2.The washer ④ should be placed to prevent water penetration.

3.Before assembling ② and ③, the Volume VR must be at minimum in advance

3. Measurements and Adjustments

● **ALIGNMENT POINTS**

Please refer to Circuit Board and Wiring Connection Diagram to locate test points.

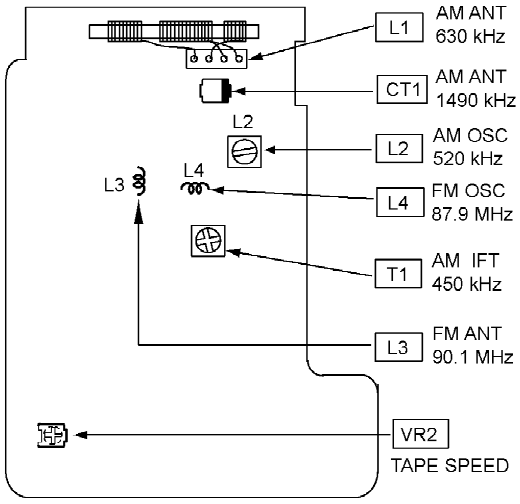


Fig.1

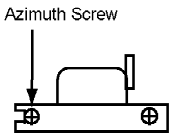


Fig.2

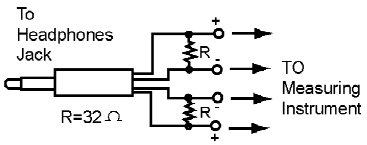


Fig.3

● Adjustment Instructions

READ CAREFULLY BEFORE ATTEMPTING ADJUSTMENTS	
1. Set volume control to maximum. 2. Set band selector switch to AM or FM. 3. Set Function selsctir switch to radio or tape. 4. Set power source volate to 1.5V DC. 5. Set tape selector switch to normal.	6. Output of signal generator should be no higher than necessary to obtain an output reading. 7. Make sure head are clean. 8. Make sure capstan and pinch roller are clean.

● TUNER SECTION

AM ADJUSTMENT

	BAND	SIGNAL GENERATOR or SWEEP GENERATOR		RADIO DIAL SETTING	INDICATOR (ELECTRONIC VOLTMETER or OSCILLOSCOPE)	ADJUSTMENT POINT	REMARKS
		CONNECTIONS	FREQUENCY				
		AM-IF ADJUSTMENT					
(1)	AM	Fashion a loop of several turns of wire and radiate signal into loop of receiver.	450 kHz 30% Mod. at 400Hz	Point of non-interference. (on/about 600kHz)	Headphones Jack (32 Ω) (Refer to Fig.3)	T1 (AM IFT)	Adjust for maximum output.
		AM-RF ADJUSTMENT					
(2)	AM	Fashion a loop of several turns of wire and radiate signal into loop of receiver.	520 kHz	Tuning capacitor fully closed.	Headphones Jack (32 Ω) (Refer to Fig.3)	L2 (AM OSC Coil)	Adjust for maximum output.
(3)	AM	"	630 kHz	Tune to signal.	"	(*1) L1 (AM ANT Coil)	Adjust for maximum output . Adjust L1 by moving coil bobbin along ferrite core.
(4)	AM	"	1490 kHz	Tune to signal	"	CT1 (AM ANT Trimmer)	Adjust for maximum output. Repeat steps (2)~ (4).
	(* 1) Cement antenna bobbin with wax after completing adjustment.						

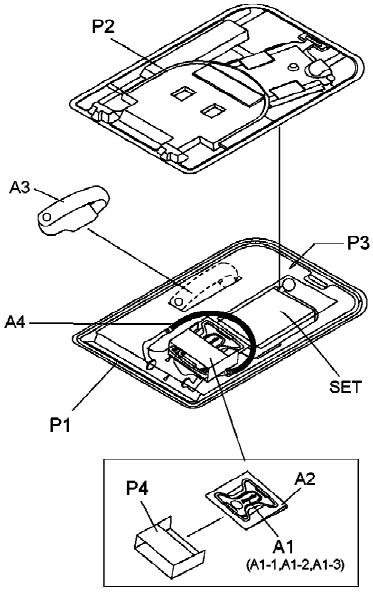
FM ADJUSTMENT

	BAND	SIGNAL GENERATOR		RADIO DIAL SETTING	INDICATOR (ELECTRONIC VOLTMETER or OSCILLOSCOPE)	ADJUSTMENT POINT	REMARKS
		CONNECTIONS	FREQUENCY				
		FM-RF ADJUSTMENT					
(1)	FM	Connect to test point 1 through FM dummy antenna. Negative side to test point 2.	87.9 MHz	Variable capacitor fully closed.	Headphones Jack (32 Ω) (Refer to Fig.3)	L4 (FM OSC Coil)	(*2) Adjust for maximum output.
(2)	FM		90.1 MHz	Tune to signal	"	L3 (FM ANT Coil)	"
	(*2) three output responses will be present ; proper tuning is the center frequency.						

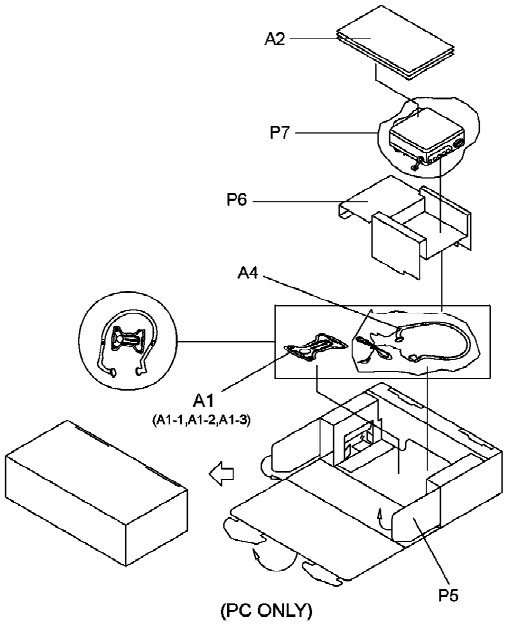
● Measurement and Adjustment

ITEM	TEST TAPE	MEASUREMENT POINT	ADJUSTMENT POINT	PROCEDURE
(A) Azimuth	QZZCFM (8kHz, -20 dB)	Connect the frequency count to Headphones jack (32 Ω) (Refer to Fig.3)	Azimuth adjustment screw (Refer to Fig.2)	Adjust the azimuth adjustment screw during repeated forward and reverse playback to obtain the maximum head azimuth allgnment with both channels equal. Then screw-lock the adjustment in place.
(B) Tape speed	QZZCWAT (3 kHz, -10 dB)	Connect the frequency count to Headphones jack (32 Ω) (Refer to Fig.3)	VR2 (Refer to Fig.1)	Playback the central part of the tape and adjust VR2 so that the tape speed is as follow. 3000 ± 60 Hz (Forward & Reverse)

4. Packaging



(P,PY ONLY)



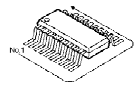
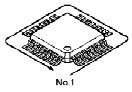
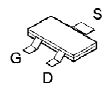
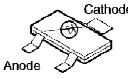
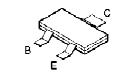
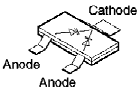
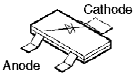
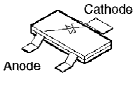
(PC ONLY)

5. Schematic Diagram Notes

Notes:
1.S1-1,1-2: FM reception switch in "NOR" position. (1...NOR, 2...CITY)
2.S2: Oper/REV,Close/FWD switch in "Oper/REV" position.
3.S5: Motorswitch in "OFF" position.
4.S201: LAP switch in "OFF" position.
5.S202: Hold switch in "OFF" position.
6.S204: Radio/Band/Mode selsct (• AM/FM/OFF/ ▬ MODE) switch in "OFF" position.
7.S205: XBS/BATT CHK switch in "OFF" position.
8.S206~210: Direct tuning switch. [S206:DM1, S207:DM2,S208:DM3, S209:DM4,S210:DM5].
9.S211: Tune down switch in "OFF" position.
11.S212: Tune up switch in "OFF" position.
12.VR1-1: Volume control VR (Lch).
VR1-2: Volume control VR (Rch).
13.VR2: Tape Speed adjustment VR.
14.The mark (■) shows test point e.g. **1** = test point 1.
15.DC voltage measurement are taken witch electronics.
16.Voltmeter from negative terminal of battery.
< >...FM position, ( )...AM position,
[ ]....FM & AM Position,No mark...Playback position.
17.Battery current: Volume minimum output (Radio).....70 mA.
Volume minimum output (Tape).....80 mA.
Volume maximum output (Radio)....85 mA.
Volume maximum output (Tape).....110 mA
(Radio, 74dB 30% Modulation.)
18. ⟶ +B Voltage Line, ➡ FM Signal.
▫▫▫▷ Playback Signal, ▪▪▪▶ Playback & Radio Signal.

● This schematic diagram may be modified at any time with the development of new technology.

■ TYPE ILLUSTRATION OF IC, TRANSISTOR AND DIODE

 TA2111FEL LB1674MTPT1 XC651A1002VR	 BA3632KE2 LC72342-9403	 2SK303V3TB
 SB07-03CTX	 RVTDTA143XUX RVTDTC143TUX	2SB1295-6-TB 2SC4774ST106 2SD1328STXRA 2SD1048X7TX 2SB815B7TX RVTDTA144EUX RVTDTC144TUX RVTDTA144EUX
 SVC220-TB SVC347-TL RVDDAN202UTX	 MA110TX MA728TX	 MA8120MTX

6. Schematic Diagram

7. Printed Circuit Board Diagram

8. Terminal Function of IC's

■ TERMINAL FUNCTION OF IC'S

● IC202 (LC72342-9403):SYSTEM CONTROL & LCD DRIVE

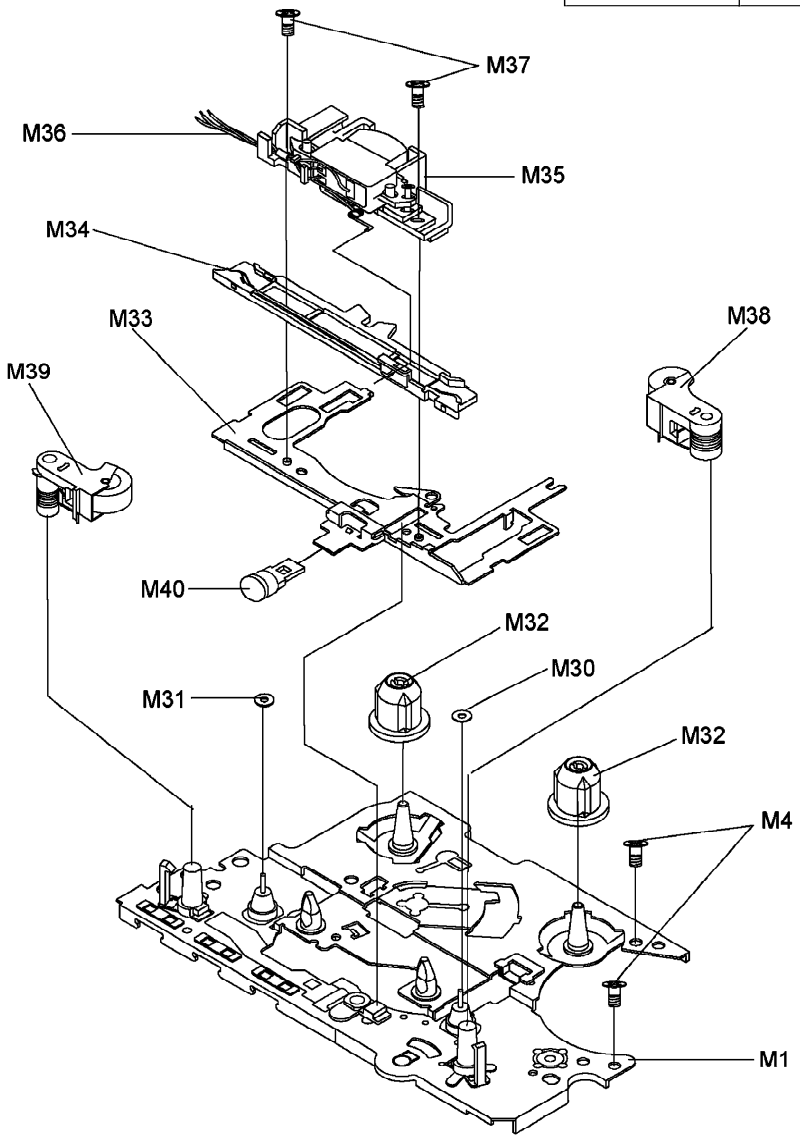
Pin No.	Terminal Name	I/O	Function
1	X IN	O	Intput terminal used for connecting a guartz oscillator
2	TEST 2	I	Test terminal
3	L TEST	I	Test terminal
4	TAPE IN	I	Date signal input terminal
5,6.	PA 1~PA 0	I	Terminal for key return signal input
7~10	PB 3 ~ PB 0	O	Key return signal source output terminal for momentary switch on the key matrix
11	SD	I	Input the SD signal terminal
12	POWER ON	O	Outputs terminal for power ON control signal
13	AM/FM	O	Band select output terminal
14	XBS ON	O	Output the XBS ON control terminal
15	VMSS ON	O	Output the VMSS ON control terminal
16	RADIO ON	O	Radio ON output the power out terminal
17	TAPE ON	O	Tape ON output the power out terminal
18	Vcc-CHK	I	Battery voltage detect terminal
19	MOTE	O	Not connected
20	BUZR	O	Output the buzzer out terminal
21	BATT IN	I	Data signal input terminal
22	ADI 1	I	Key input terminal
23	ADI 0	I	Bayyery voltage detect terminal
24	Vss	–	For ground connection
25	HOLD	–	Data signal input terminal (Hold detect terminal)
26	VMSS IN	I	VMSS signal input terminal
27	MUTE	O	Muting signal output terminal
28	MODEL	I	Moue set terminal
29~ 44	LCD (S16~S1)	O	Output terminal for LCD segment signals
45~ 48	COM 4~ COM 1	O	Output terminal for LCD common signals
49~ 52	DBR4~ DBR1	–	Condensev external terminal
53	REST	–	Rest terminal
54	NC	I	Not connected
55	VDD	–	Power terminal
56	FM IN	I	Input the local oscillator VCO (10~30 MHz)
57	AM IN	I	Input the local oscillator VCO (0.5~40 MHz)
58	VSS	–	For ground connection
59	EO	O	PLL error output terminal
60	A IN	O	L.F.P IN terminal
61	A OUT	O	L.F.P out terminal
62	A GND	O	For ground connection
63	TEST 1	I	For ground connection
64	X OUT	I	Input terminal used for connecting a quartz oscillator

9. Mechanism Parts Location-1

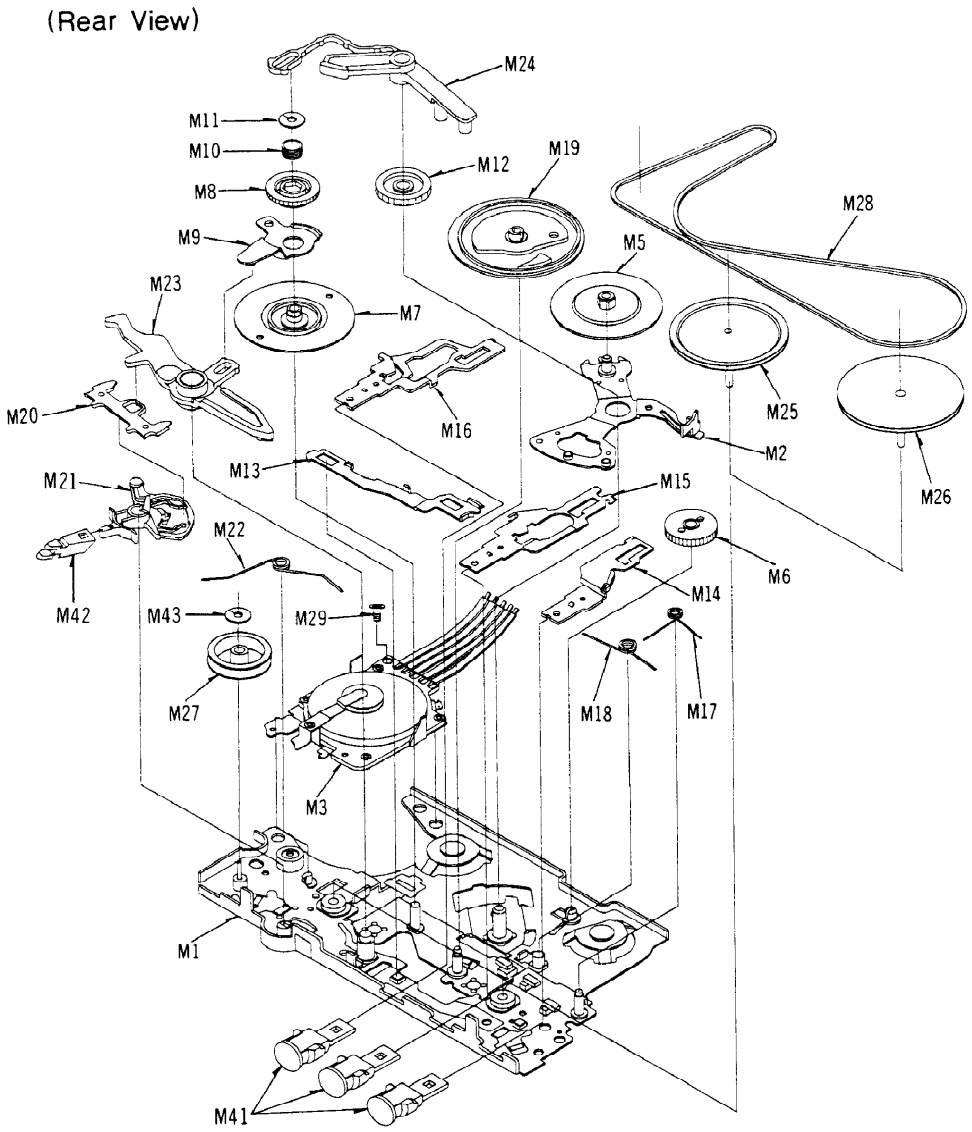
■ SPECIFICATIONS

Pressure of Pressure roller	120gr
Wow & Futter	Less than 0.35% (WRMS)
Playback torque	15 ~ 30 gr-cm
FF torque	60 ~ 120 gr-cm
REW torque	60 ~ 120 gr-cm

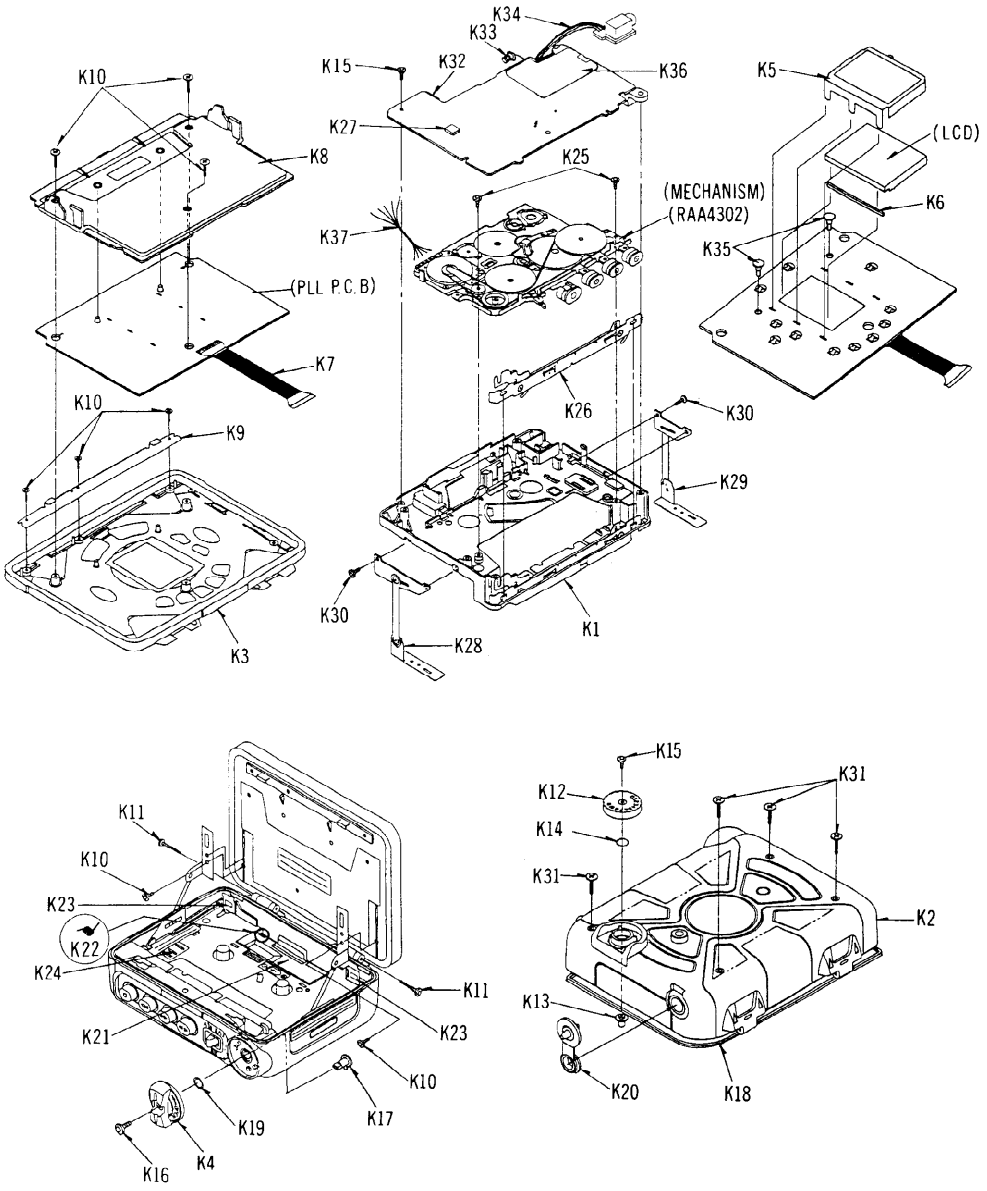
(Front View)



10. Mechanism Parts Location-2



11. Cabinet Parts Location



12. Replacement Parts List

1. (T) Indicates parts that are supplied TAMACO

2. (M) Indicates parts that are supplied MESA

3. The reference number SA represent the grease tool usea for unit.

4. The marking (RTL) indicates that Retention Time is Limited for this item. After the discontinuation of this assembly in production, the item will continue to be available for a specific period of time. The retention period of availability isdependent on the type of assembly, and in accordance with the laws governing part and

product retention. After the end of this period, the assembly will no longer be available.

Ref. No.	Part No.	Part Name & Description	Remarks
MECHANISM PARTS			
M1	RXK0221-2	Mecha Chassis Ass'y	(T)
M1	RXK0221-2	Mecha Chassis Ass'y	(T)
M2	RXL0143-1	Change Lever Ass'y	(T)
M3	BFL26NBCWA	Motor Ass'y	(T)
M4	RHD14062	Motor Screw	(T)
M5	RDG0382	Change Gear	(T)
M6	RDG0383	Idler Gear	(T)
M7	RDG0384	Play Gear	(T)
M8	RDG0385	FF Gear	(T)
M9	RML0477	Friction Lever	(T)
M10	RME0245	Friction Lever Spring	(T)
M11	RHW16018	Washer (FF Gear)	(T)
M12	RDG0386	Shift Gear	(T)
M13	RMM0172	Lock Rod	(T)
M14	RMM0173A	Stop Rod	(T)
M15	RMM0174A-1	Rew Rod	(T)
M16	RMM0175A	FF Rod	(T)
M17	RME0246	Stop Rod Spring	(T)
M18	RME0247	FF Rod Spring	(T)
M19	RXG0044-1	Main Gear Ass'y	(T)
M20	RML0478-1	FR Lever	(T)
M21	RML0479	Dir Lever	(T)
M22	RME0249	Head Plate Spring	(T)
M23	RML0480	Senser Lever	(T)
M24	RML0481	SW. Lever	(T)
M25	RXF0057	Flywheel F Ass'y	(T)
M26	RXF0056-1	Flywheel R Ass'y	(T)
M27	RDP0105	Center Pulley	(T)
M28	RDV0058	Belt	(T)
M29	RHD14061	Motor Earth Screw	(T)
M30	RHW11004-1	Washer(B)	(T)
M31	RHW12021-1	Washer(D)	(T)
M32	RDG0381	Reel Gear	(T)
M32	RDG0381	Reel Gear	(T)
M33	RMA1044A	Head Plate	(T)
M34	RMM0171-1	FR Rod	(T)
M35	RED0053-1	Head Block Ass'y	(T)
M36	RFF0772	Head Wire Ass'y	(T)
M37	XQN16+CF35	Head Base Screw	(T)
M38	RXL0140-3	Pinch Arm F Ass'y	(T)
M39	RXL0142-3	Pinch Arm R Ass'y	(T)
M40	RMRT0030-H	Play Button	(T)
M41	RMRT0031-H	FF / REW / STOP / Button	(T)
M42	RMRT0032-H	Dir Button	(T)
M43	RHW10003	Washer (A)	(T)
CABINET PARTS			
K1	RKMT0021-H	Middle Chassis	(T)
K2	RFKKQSW45VP	Rear Cabinet Ass'y	(T)

Ref. No.	Part No.	Part Name & Description	Remarks
K3 [P]	RFKLQSW44VPY	Cassette Cover Ass'y(Yellow)	(T)
K3 [P]	RFKLQSW44VPS	Cassette Cover Ass'y(Silver)	(T)
K3	RFKLQSW44VPK	Cassette Cover Ass'y(Black)	(T)
K3	RFKLQSW44VPA	Cassette Cover Ass'y(Blue)	(T)
K4	RFKNQSW45VP	Lock Knob Ass'y	(T)
K5	RMNT0030	LCD Angle	(T)
K6	RSQT0006	Electric Gum	(T)
K7	RJBT0072A	FPC PWB	(T)
K8	ZA06SW45VP	PCB. Shield Ass'y	(T)
K9	RMAT0023	Lock Angle	(T)
K10	XTNR14+4GFZ	Screw	(T)
K10	XTNR14+4GFZ	Screw	(T)
K10	XTNR14+4GFZ	Screw	(T)
K10	XTNR14+4GFZ	Screw	(T)
K11	RHDT0010	Screw	(T)
K11	RHDT0010	Screw	(T)
K12	RGWT0009-K	Volume Knob	(T)
K13	RMRT0004-X	Volume Connect Piece	(T)
K14	RMGT0021-H	HP/VR 0" Link	(T)
K15	XTNR14+45GFZ	Screw	(T)
K15	XTNR14+45GFZ	Screw	(T)
K16	XTNR2+6GW	Screw (Lock Knob)	(T)
K17	RMRT0023-H1	Rotate Lever	(T)
K18	RMGT0022-D	Resistant Link Gum	(T)
K19	RMGT0009-K	Lock 0" Link	(T)
K20	RGQT0022-K	HP Jack Cover Gum	(T)
K21	RKKT0014-H	Battery Cover	(T)
K22	RMBT0004	Spring	(T)
K23	RMCT0007	Tape Spring	(T)
K23	RMCT0007	Tape Spring	(T)
K24	RGVT0029-H	FM Sens Knob	(T)
K25	RHD003TZA	Screw (Deck)	(T)
K26	RMAX1055	Anchor Plate	(T)
K27	RMGT0005-Y	Gum	(T)
K28	RMAX1056	Tape Supporter Board (L)	(T)
K29	RMAX1057	Tape Supporter Board (R)	(T)
K30	XTNR17+3CFN	Screw	(T)
K30	XTNR17+3CFN	Screw	(T)
K31	RHDT0009	Screw	(T)
K31	RHDT0009	Screw	(T)
K32	RJCT30015	Battery Terminal (+)	(T)
K33	RJCT70014	Battery Terminal (-)	(T)
K34	RWJT0304080A	4P Wire	(T)
K35	RGUT0070-K	Tape Gum	(T)
K36	RMZT0011	PCB Sheet	(T)
K37	RWJT1105055	5P Wire	(T)
ACCESSORIES			
A1	ZA05SW45VP	Belt Clip Ass'y	(T)
A1	ZA05SW45VP	Belt Clip Ass'y	(T)
A1-1	RGQT0023-K	Belt Clip	(T)
A1-2	RHDT0006-K	Belt Clip Lock Screw	(T)
A1-3	XUC25FY	"E" Link	(T)
A2 [P]	RQTT0379-1P	Instruction Book	(T)
A2 [PC]	RQTT0380-1C	Instruction Book	(T)

Ref. No.	Part No.	Part Name & Description	Remarks
A3 [P]	RGQT0018-K	Head Strap	(T)
A4 [P]	RFEV708P-YY	Headphones (Yellow)	(T)
A4 [P]	RFEV708P-HY	Headphones (Silver)	(T)
A4	RFEV708P-HY	Headphones (Black)	(T)
A4	RFEV708P-A1Y	Headphones (Blue)	(T)
PACKING MATERIALS			
P1 [P][PY]	RPNT0293	Clam Sheel (Front)	(T)
P2 [P][PY]	RPNT0294	Clam Sheel (Rear)	(T)
P3 [P]	RPQT0139	Pad (Yellow)	(T)
P3 [P]	RPQT0142	Pad (Silver)	(T)
P3 [P][PY]	RPQT0141	Pad (Black)	(T)
P3 [P][PY]	RPQT0140	Pad (Blue)	(T)
P4 [P][PY]	RPNT0304	Pad	(T)
P5 [PC]	RPKT0364	Decoration Box (Black)	(T)
P5 [PC]	RPKT0365	Decoration Box (Blue)	(T)
P6 [PC]	RPNT0202	Pad	(T)
P7 [PC]	RPFT0016	Set Bag (Blue)	(T)
P7 [PC]	RPFT0014	Set Bag (Black)	(T)
JIG/TOOL			
SA1	QZZCWAT	TEST TAPE(Tape Speed etc)	(M)
SA2	QZZCFM	TEST TAPE(AZIMUTH/FREQ)	(M)
MEC1	RAA4302	MECHA Ass'y	(T)
PCB1	RFKJQSW44VP	P.C.B.Ass'y*(Main & PLL)	(T)
PCB1-1	APSW44VP-A	Main P.C.B. Ass'y *	(T)
PCB1-2	BPSW44VP-A	PLL P.C.B. Ass'y *	(T)
INTEGRATED CIRCUITS TRANSISTORS AND DIODES			
IC1	BA3632KE2	I.C.PRE-Power	(T)
IC2	TA2111FEL	I.C.TUNER	(T)
IC3	LB1674MTPT1	I.C.MOTOR DRIVE	(T)
IC201	XC651A1002VR	I.C.MULTI	(T)
IC202	LC72342-9403	I.C.MICON CPU	(T)
Q1	2SC4774ST106	Transistor	(T)
Q2	RVTDTA143XUX	Transistor	(T)
Q3	RVTDTC143TUX	Transistor	(T)
Q4	2SB1295-6-TB	Transistor	(T)
Q5	RVTDTC143TUX	Transistor	(T)
Q6	RVTDTC144TUX	Transistor	(T)
Q7	RVTDTA143XUX	Transistor	(T)
Q201	2SK303V3TB	F.E.T.	(T)
Q202	RVTDTC144EUX	Transistor	(T)
Q203	2SD1328STXRA	Transistor	(T)
Q205	2SD1048X7TX	Transistor	(T)
Q207	2SB815B7TX	Transistor	(T)
Q210	2SB1295-6-TB	Transistor	(T)
Q211	RVTDTC143TUX	Transistor	(T)
Q212	RVTDTA143XUX	Transistor	(T)
Q214	RVTDTC143TUX	Transistor	(T)
Q215	RVTDTA144EUX	Transistor	(T)
D1	SVC220-TB	Diode	(T)
D2	SVC220-TB	Diode	(T)
D3	SVC347-TL	Diode	(T)
D201	MA8120MTX	Diode	(T)
D202	MA728TX	Diode	(T)
D203	MA110TX	Diode	(T)

Ref. No.	Part No.	Part Name & Description	Remarks
D204	MA720TX	Diode	(T)
D205	SB07-03CTX	Diode	(T)
D208	RVDDAN202UTX	Diode	(T)
COILS AND TRANSFORMERS			
L1	RLV2N047-L	Bar Antenna Ass'y	(T)
L2	RLO2A011M-M	Oscillator Coil (AM)	(T)
L3	RLO4Y258-L	Antenna Coil (FM)	(T)
L4	RLO4Y15-2	Antenna Coil (FM)	(T)
L5	RLBN182DV-Y	Chip Coil	(T)
L6	RLQZ010KM-T	Choke Coil (RF)	(T)
L201	RLQU101KT-W	Chip Coil	(T)
L202	RLQU101KT-W	Chip Coil	(T)
L203	RLO9U006-M	D-D Conv Coil	(T)
L204	RLBN182DV-Y	Chip Coil	(T)
T1	RLI2A016M-T1	I.F.T. (MW)	(T)
VARIABLE RESISTORS			
VR1	RRV08B01C14A	V.R. Volume	(T)
VR2	RRN3A03BJ3XE	V.R. Tape Speed	(T)
TRIMMER CAPACITOR			
CT1	ECRLA010A53R	Trimmer	(T)
CERAMIC FILTERS			
CF1	RLFFETNL02AL	Ceramic Filter	(T)
CF2	RLFPFS450A3	Ceramic Filter	(T)
CF3	RLFDFT03AL	Ceramic Filter	(T)
CRYSTAL			
X201	RSXD75K0S07	Crystal	(T)
LCD			
LCD201	RSL5201-P	L.C.D.	(T)
COMPONENT COMINATION			
Z1	RCRBMT004-H	Band Pass Filter	(T)
SWITCHES			
S1	RSS2B018-K	NOR / CITY Switch	(T)
S2	RSH1A041-I	REV / FWD Switch	(T)
S5	RSH1A041-I	Motor Switch	(T)
JACK			
J1	RJJ34TK02-C	Headphones Jack	(T)
RESISTORS			
R1	ERJ3GEYJ104V	RESISTORS	(M)
R2	ERJ3GEYJ103V	RESISTORS	(M)
R4	ERJ3GEYJ223V	RESISTORS	(M)
R5	ERJ3GEYJ4R7V	RESISTORS	(M)
R6	ERJ3GEYJ472V	RESISTORS	(M)
R7	ERJ3GEYJ104V	RESISTORS	(M)
R8	ERJ3GEYJ151V	RESISTORS	(M)
R9	ERJ3GEYJ104V	RESISTORS	(M)
R10	ERJ3GEYJ682V	RESISTORS	(M)
R11	ERJ3GEYJ151V	RESISTORS	(M)
R12	ERJ3GEYJ473V	RESISTORS	(M)
R13	ERJ3GEYJ472V	RESISTORS	(M)
R14	ERJ3GEYJ104V	RESISTORS	(M)
R15	ERJ3GEYJ222V	RESISTORS	(M)
R16	ERJ3GEYJ154V	RESISTORS	(M)
R17	ERJ3GEYJ104V	RESISTORS	(M)
R18	ERJ3GEYJ104V	RESISTORS	(M)

Ref. No.	Part No.	Part Name & Description	Remarks
R19	ERJ3GEYJ222V	RESISTORS	(M)
R20	ERJ3GEYJ154V	RESISTORS	(M)
R21	ERJ3GEYJ682V	RESISTORS	(M)
R22	ERJ3GEYJ222V	RESISTORS	(M)
R24	ERJ3GEYJ393V	RESISTORS	(M)
R25	ERJ3GEYJ393V	RESISTORS	(M)
R26	ERJ3GEYJ222V	RESISTORS	(M)
R27	ERJ3GEYJ331V	RESISTORS	(M)
R28	ERJ3GEYJ2R2V	RESISTORS	(M)
R29	ERJ3GEYJ2R2V	RESISTORS	(M)
R30	ERJ3GEYJ332V	RESISTORS	(M)
R31	ERJ3GEYJ104V	RESISTORS	(M)
R32	ERJ3GEYJ224V	RESISTORS	(M)
R33	ERJ6GEYJ102V	RESISTORS	(M)
R34	ERSL20J152U	RESISTORS	(T)
R35	ERJ3GEYJ682V	RESISTORS	(M)
R36	ERJ3GEYJ562V	RESISTORS	(M)
R37	ERJ3GEYJ104V	RESISTORS	(M)
R38	ERJ3GEYJ223V	RESISTORS	(M)
R39	ERJ3GEYJ563V	RESISTORS	(M)
R40	ERJ3GEYJ331V	RESISTORS	(M)
R46	ERJ3GEYJ334V	RESISTORS	(M)
R201	ERJ6GEYJ103V	RESISTORS	(M)
R202	ERJ6GEYJ472V	RESISTORS	(M)
R203	ERJ6GEYJ471V	RESISTORS	(M)
R204	ERJ3GEYJ224V	RESISTORS	(M)
R206	ERJ3GEYG104V	RESISTORS	(M)
R207	ERJ6GEYJ331V	RESISTORS	(M)
R209	ERJ3GEYJ134V	RESISTORS	(M)
R210	ERJ6GEYJ474V	RESISTORS	(M)
R212	ERJ6GEYJ470V	RESISTORS	(M)
R213	ERJ3GEYJ184V	RESISTORS	(M)
R214	ERJ3GEYJ274V	RESISTORS	(M)
R216	ERJ6GEYJ684V	RESISTORS	(M)
R217	ERJ6GEYJ101V	RESISTORS	(M)
R219	ERJ6GEYJ152V	RESISTORS	(M)
R220	ERJ6GEYJ272V	RESISTORS	(M)
R221	ERJ6GEYJ822V	RESISTORS	(M)
R222	ERJ6GEYJ102V	RESISTORS	(M)
R223	ERJ6GEYJ684V	RESISTORS	(M)
R231	ERJ3GEYJ472V	RESISTORS	(M)
R232	ERJ3GEYJ472V	RESISTORS	(M)
R238	ERJ6GEYJ102V	RESISTORS	(M)
R239	ERJ6GEYJ474V	RESISTORS	(M)
R242	ERJ6GEYJ274V	RESISTORS	(M)
R243	ERJ6GEYJ104V	RESISTORS	(M)
R244	ERJ6GEYJ684V	RESISTORS	(M)
R246	ERJ3GEYG683V	RESISTORS	(M)
R247	ERJ3GEYJ623V	RESISTORS	(T)
R248	ERJ3GEYG823V	RESISTORS	(T)
R249	ERJ3GEYG104V	RESISTORS	(M)
R250	ERJ3GEYJ134V	RESISTORS	(M)
R251	ERJ3GEYJ184V	RESISTORS	(M)
R252	ERJ3GEYJ274V	RESISTORS	(M)

Ref. No.	Part No.	Part Name & Description	Remarks
R253	ERJ3GEYG564V	RESISTORS	(T)
R254	ERJ3GEYG564V	RESISTORS	(T)
CHIP JUMPERS			
RJ1	ERJ6GEY0R00V	CHIP JUMPERS	(M)
RJ2	ERJ6GEY0R00V	CHIP JUMPERS	(M)
RJ3	ERJ6GEY0R00V	CHIP JUMPERS	(M)
RJ42	ERJ3GEY0R00V	CHIP JUMPERS	(M)
RJ43	ERJ3GEY0R00V	CHIP JUMPERS	(M)
RJ201	ERJ6GEY0R00V	CHIP JUMPERS	(M)
RJ202	ERJ6GEY0R00V	CHIP JUMPERS	(M)
RJ203	ERJ3GEY0R00V	CHIP JUMPERS	(M)
RJ205	ERJ6GEY0R00V	CHIP JUMPERS	(M)
RJ207	ERJ6GEY0R00V	CHIP JUMPERS	(M)
RJ208	ERJ6GEY0R00V	CHIP JUMPERS	(M)
RJ209	ERJ6GEY0R00V	CHIP JUMPERS	(M)
CAPACITORS			
C1	ECUV1H681KBN	CAPACITORS	(M)
C2	ECUV1H681KBN	CAPACITORS	(M)
C3	ECUV1E103KBN	CAPACITORS	(M)
C4	ECEA0JKS220I	CAPACITORS	(M)
C6	ECUV1H102KBN	CAPACITORS	(M)
C7	ECEA0GKS330I	CAPACITORS	(M)
C8	ECUV1H271KCN	CAPACITORS	(M)
C9	ECUV1E103KBN	CAPACITORS	(M)
C10	ECUV1H102KBN	CAPACITORS	(M)
C11	ECUV1H102KBN	CAPACITORS	(M)
C12	ECUV1H331KBN	CAPACITORS	(M)
C13	ECUV1H020CCN	CAPACITORS	(M)
C14	ECUV1C223KBN	CAPACITORS	(M)
C15	ECEA0GKS330I	CAPACITORS	(M)
C16	ECEA0GKS221	CAPACITORS	(M)
C17	ECST1AY225R	CAPACITORS	(M)
C18	ECUV1C104ZFN	CAPACITORS	(M)
C19	ECUV1C224ZFN	CAPACITORS	(M)
C21	ECUV1C224ZFN	CAPACITORS	(M)
C22	ECUV1C223KBN	CAPACITORS	(M)
C23	ECUV1H100DCN	CAPACITORS	(M)
C24	ECUV1C474ZFN	CAPACITORS	(M)
C25	ECUV1H220JCN	CAPACITORS	(M)
C26	ECUV1H391GCV	CAPACITORS	(M)
C27	ECUVNC105ZFN	CAPACITORS	(M)
C28	ECUV1H681KBN	CAPACITORS	(M)
C29	ECUV1C154ZFN	CAPACITORS	(M)
C30	ECEA1EKS4R7I	CAPACITORS	(M)
C31	ECUV1H102KBN	CAPACITORS	(M)
C32	ECUV1H102KBN	CAPACITORS	(M)
C33	ECUVNC105ZFN	CAPACITORS	(M)
C34	ECEA0GKS330I	CAPACITORS	(M)
C35	ECUVNC105ZFN	CAPACITORS	(M)
C36	ECUV1H681KBN	CAPACITORS	(M)
C37	ECST0GY106R	CAPACITORS	(M)
C38	ECUV1H060DCN	CAPACITORS	(M)
C39	ECUV1H102KBN	CAPACITORS	(M)
C42	ECUV1C224ZFN	CAPACITORS	(M)

Ref. No.	Part No.	Part Name & Description	Remarks
C43	ECUV1C104ZFN	CAPACITORS	(M)
C44	ECST0GY226R	CAPACITORS	(M)
C45	ECUV1C104ZFN	CAPACITORS	(M)
C46	ECUV1C473KBN	CAPACITORS	(M)
C47	ECUV1C474ZFN	CAPACITORS	(M)
C48	ECUV1H060DCN	CAPACITORS	(M)
C49	ECUV1C104ZFN	CAPACITORS	(M)
C50	ECUV1C474ZFN	CAPACITORS	(M)
C51	ECUV1C474ZFN	CAPACITORS	(M)
C52	ECST0GY475R	CAPACITORS	(M)
C53	ECEA0GKS221	CAPACITORS	(M)
C55	ECUV1C104ZFN	CAPACITORS	(M)
C56	ECUV1H221KBV	CAPACITORS	(M)
C57	ECUV1H102KBN	CAPACITORS	(M)
C58	ECEA0GKS221	CAPACITORS	(M)
C59	ECUVNC105ZFN	CAPACITORS	(M)
C60	ECUV1C224ZFN	CAPACITORS	(M)
C61	ECUV1C104ZFN	CAPACITORS	(M)
C62	ECUV1C104ZFN	CAPACITORS	(M)
C63	ECUVNC105ZFN	CAPACITORS	(M)
C64	ECEA0GKS471	CAPACITORS	(M)
C65	ECUV1E103KBN	CAPACITORS	(M)
C66	ECUV1E103KBN	CAPACITORS	(M)
C67	ECEA0GKS221	CAPACITORS	(M)
C68	ECUV1C104ZFN	CAPACITORS	(M)
C69	ECUV1C683KBN	CAPACITORS	(M)
C70	ECUV1C823KBN	CAPACITORS	(M)
C71	ECUV1C224ZFN	CAPACITORS	(M)
C72	ECUV1E103KBN	CAPACITORS	(M)
C73	ECUV1H221KBN	CAPACITORS	(M)
C77	ECUV1E103KBN	CAPACITORS	(M)
C78	ECUV1C334ZFN	CAPACITORS	(M)
C79	ECUV1C474ZFN	CAPACITORS	(M)
C80	ECUV1H470KCN	CAPACITORS	(M)
C81	ECEA0GKS471	CAPACITORS	(M)
C82	ECUV1H101KCN	CAPACITORS	(M)
C201	ECUV1H103ZFN	CAPACITORS	(M)
C203	ECUVNC105ZFN	CAPACITORS	(M)
C204	ECST1CY105R	CAPACITORS	(M)
C205	ECUV1C223KBN	CAPACITORS	(M)
C206	ECST0GY226R	CAPACITORS	(M)
C207	ECUV1C224ZFN	CAPACITORS	(M)
C208	ECST0GY106R	CAPACITORS	(M)
C209	ECUV1H103ZFN	CAPACITORS	(M)
C210	ECUVNC105ZFN	CAPACITORS	(M)
C211	ECUV1C223KBN	CAPACITORS	(M)
C212	ECUV1H103ZFN	CAPACITORS	(M)
C213	ECUVNC105ZFN	CAPACITORS	(M)
C214	ECUV1C224ZFN	CAPACITORS	(M)
C215	ECST0GY475R	CAPACITORS	(M)
C216	ECST1AY335R	CAPACITORS	(M)
C217	ECUVNC105ZFN	CAPACITORS	(M)
C219	ECUV1H103ZFN	CAPACITORS	(M)
C220	ECUVNC105ZFN	CAPACITORS	(M)

Ref. No.	Part No.	Part Name & Description	Remarks
C221	ECUV1H102KBN	CAPACITORS	(M)
C222	ECST1CY155RR	CAPACITORS	(M)
C225	ECUV1H120KCN	CAPACITORS	(M)
C226	ECUV1C104ZFN	CAPACITORS	(M)
C227	ECUV1C104ZFN	CAPACITORS	(M)
C228	ECUV1C104ZFN	CAPACITORS	(M)
C230	ECUV1H150KCN	CAPACITORS	(M)
C232	ECUV1C334ZFN	CAPACITORS	(M)
C235	ECUV1H103ZFN	CAPACITORS	(M)
C236	ECUV1C104ZFN	CAPACITORS	(M)
C238	ECUV1H103ZFN	CAPACITORS	(M)
C239	ECUV1H103ZFN	CAPACITORS	(M)
C241	ECUV1H103ZFN	CAPACITORS	(M)
C242	ECUV1H103ZFN	CAPACITORS	(M)
C244	ECUVNC105ZFN	CAPACITORS	(M)
C245	ECUV1C334ZFN	CAPACITORS	(M)
C253	ECST0EY336R	CAPACITORS	(M)
C254	ECUV1H103ZFN	CAPACITORS	(M)

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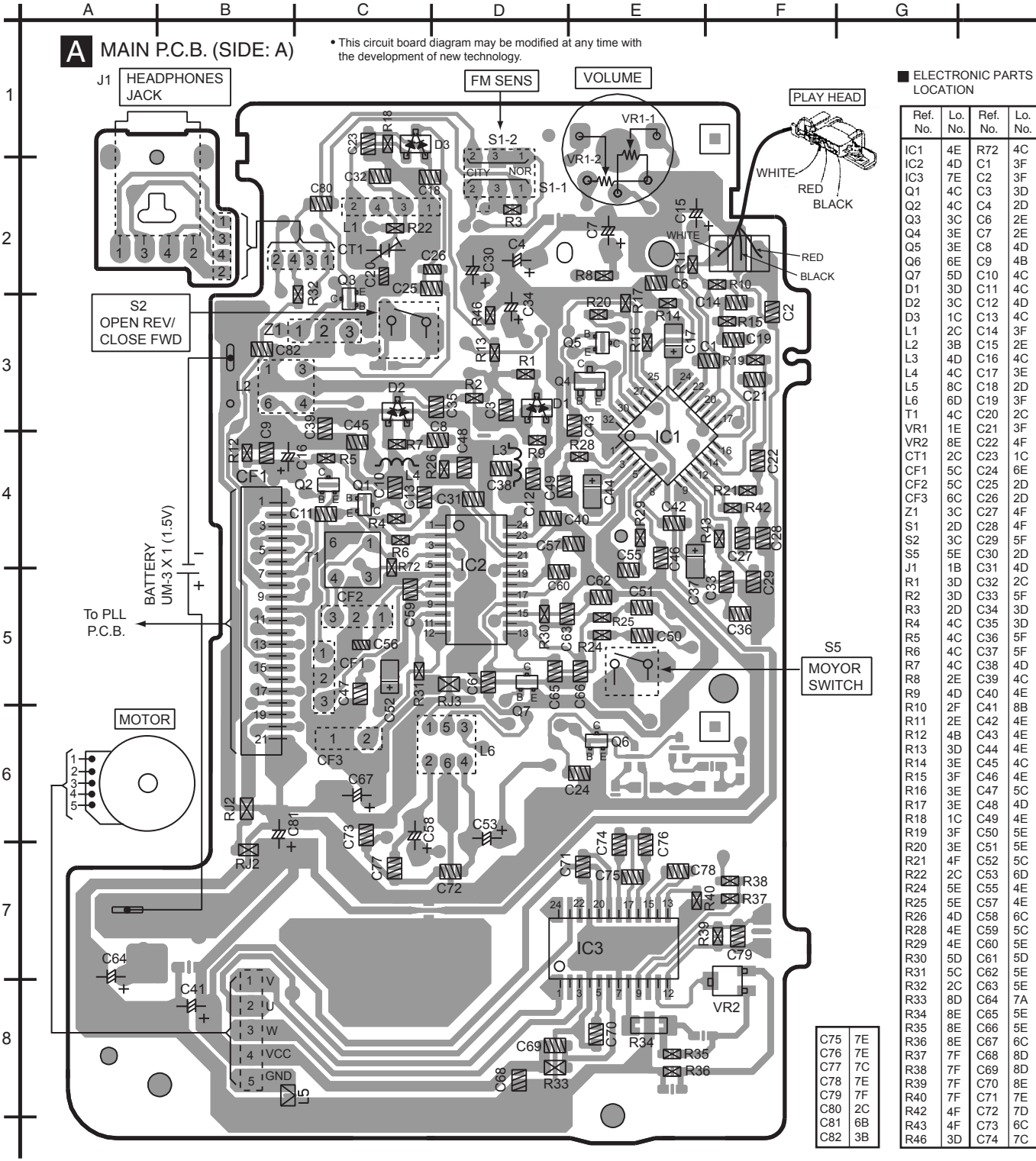
■ CIRCUIT BOARD AND WIRING CONNECTION DIAGRAM

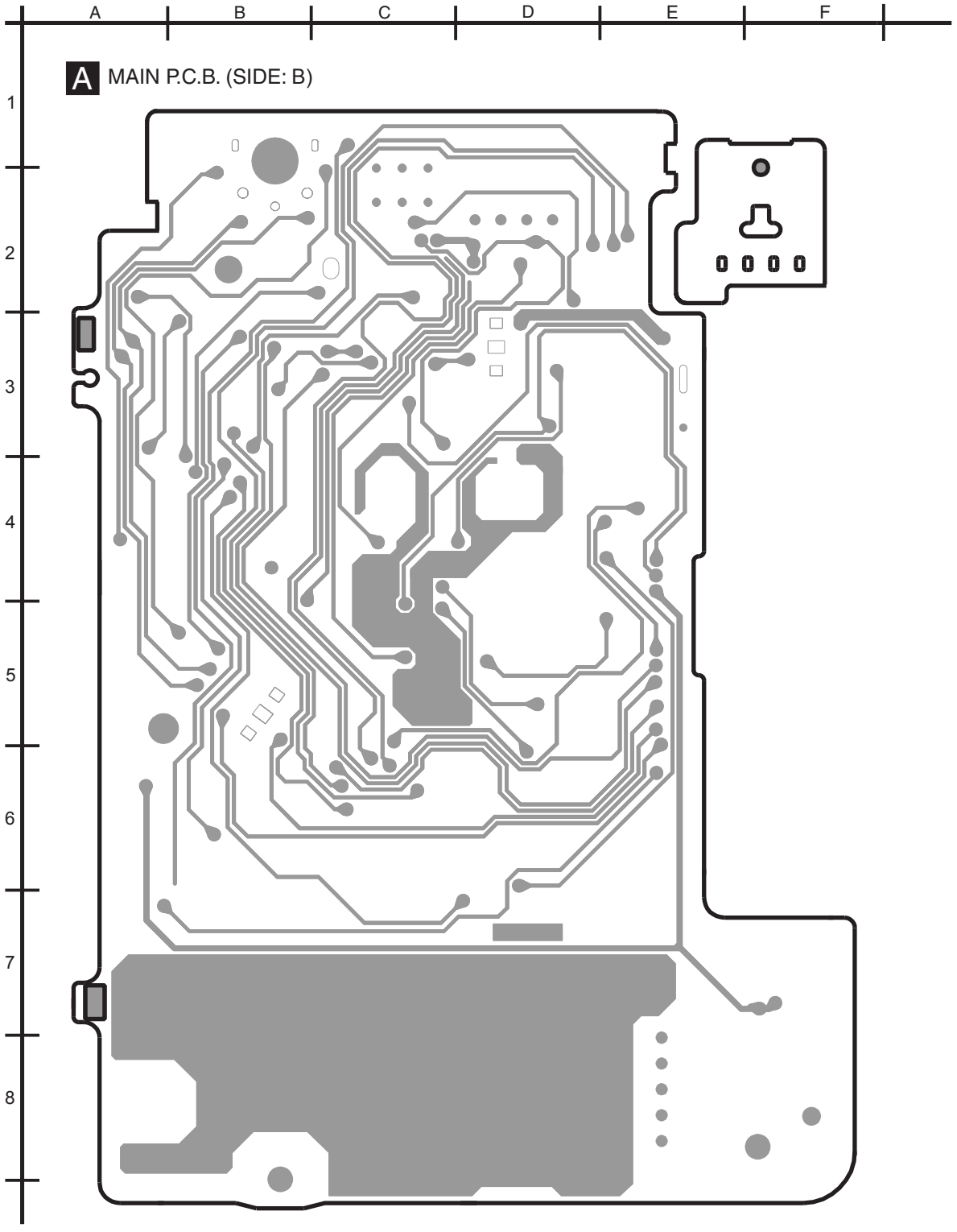


■ ELECTRONIC PARTS LOCATION

Ref. No.	Lo. No.	Ref. No.	Lo. No.
IC1	4E	R72	4C
IC2	4D	C1	3F
IC3	7E	C2	3F
Q1	4C	C3	3D
Q2	4C	C4	2D
Q3	3C	C6	2E
Q4	3E	C7	2E
Q5	3E	C8	4D
Q6	6E	C9	4B
Q7	5D	C10	4C
D1	3D	C11	4C
D2	3C	C12	4D
D3	1C	C13	4C
L1	2C	C14	3F
L2	3B	C15	2E
L3	4D	C16	4C
L4	4C	C17	3E
L5	8C	C18	2D
L6	6D	C19	3F
T1	4C	C20	2C
VR1	1E	C21	3F
VR2	8E	C22	4F
CT1	2C	C23	1C
CF1	5C	C24	6E
CF2	5C	C25	2D
CF3	6C	C26	2D
Z1	3C	C27	4F
S1	2D	C28	4F
S2	3C	C29	5F
S5	5E	C30	2D
J1	1B	C31	4D
R1	3D	C32	2C
R2	3D	C33	5F
R3	2D	C34	3D
R4	4C	C35	3D
R5	4C	C36	5F
R6	4C	C37	5F
R7	4C	C38	4D
R8	2E	C39	4C
R9	4D	C40	4E
R10	2F	C41	8B
R11	2E	C42	4E
R12	4B	C43	4E
R13	3D	C44	4E
R14	3E	C45	4C
R15	3F	C46	4E
R16	3E	C47	5C
R17	3E	C48	4D
R18	1C	C49	4E
R19	3F	C50	5E
R20	3E	C51	5E
R21	4F	C52	5C
R22	2C	C53	6D
R24	5E	C55	4E
R25	5E	C57	4E
R26	4D	C58	6C
R28	4E	C59	5C
R29	4E	C60	5E
R30	5D	C61	5D
R31	5C	C62	5E
R32	2C	C63	5E
R33	8D	C64	7A
R34	8E	C65	5E
R35	8E	C66	5E
R36	8E	C67	6C
R37	7F	C68	8D
R38	7F	C69	8D
R39	7F	C70	8E
R40	7F	C71	7E
R42	4F	C72	7D
R43	4F	C73	6C
R46	3D	C74	7C

C75	7E
C76	7E
C77	7C
C78	7E
C79	7F
C80	2C
C81	6B
C82	3B

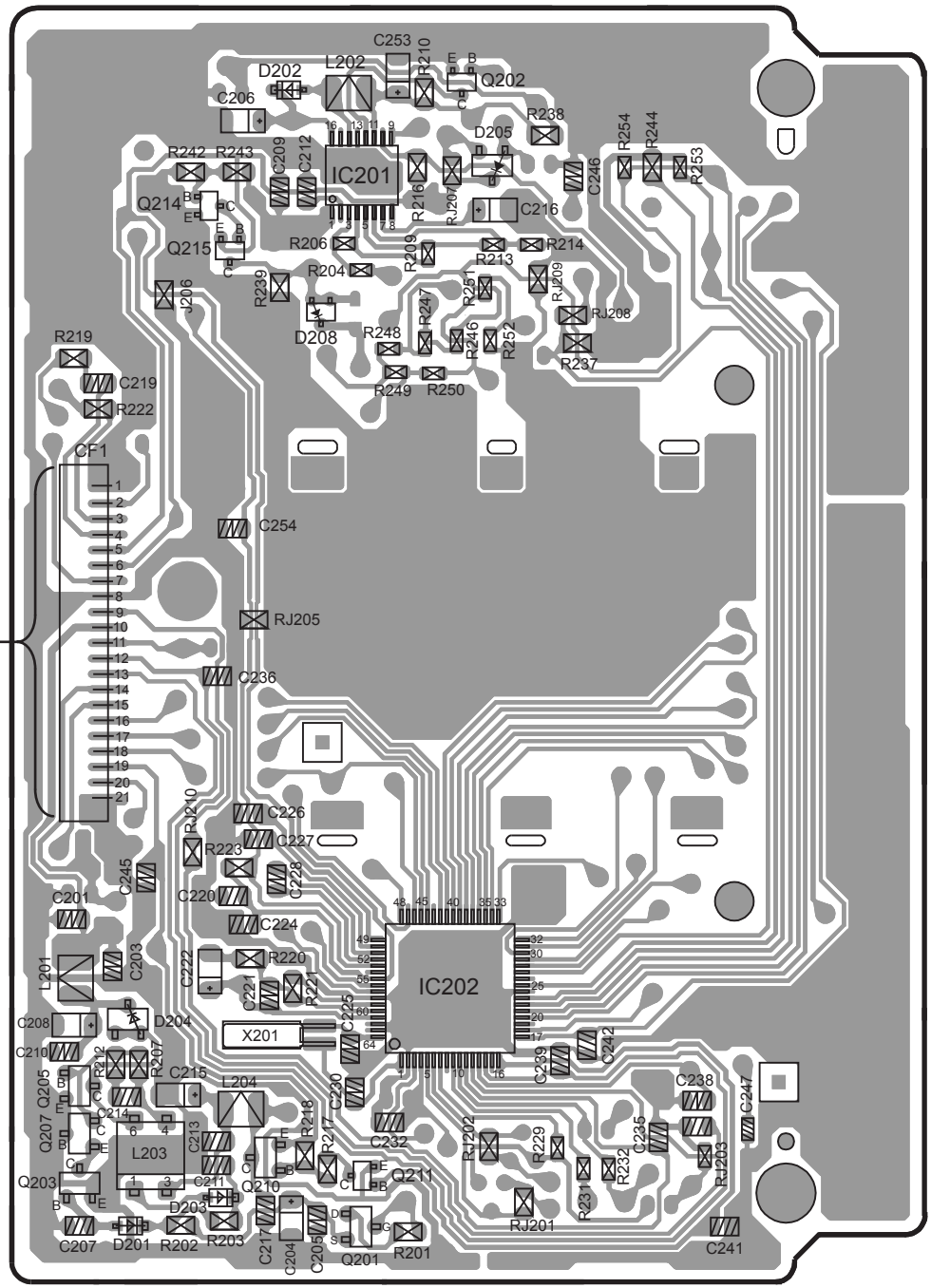
A MAIN P.C.B. (SIDE: B)



■ CIRCUIT BOARD AND WIRING CONNECTION DIAGRAM

B PLL P.C.B. (SIDE: A)

• This circuit board diagram may be modified at any time with the development of new technology.



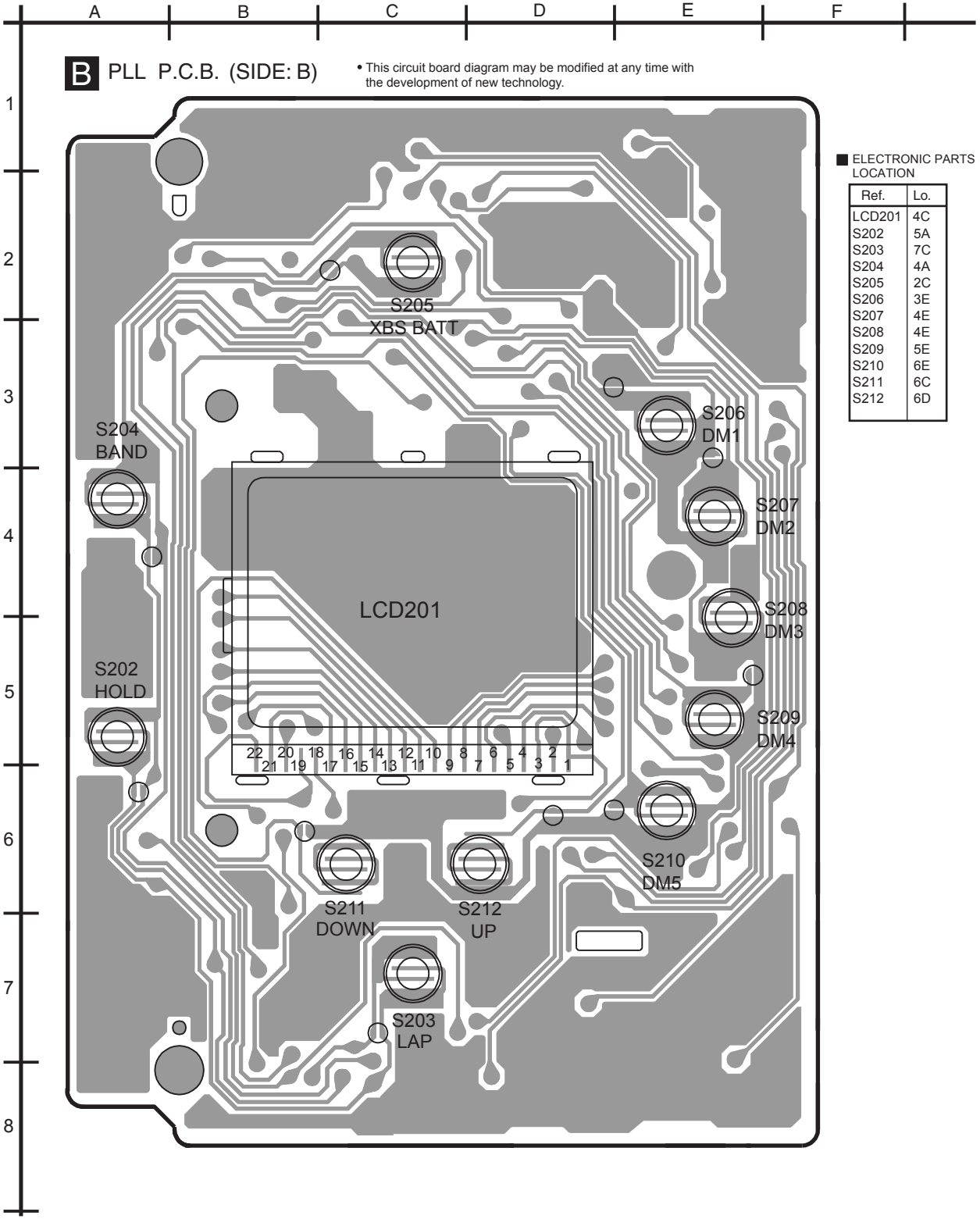
■ ELECTRONIC PARTS LOCATION

Ref.	Lo.	Ref.	Lo.
IC201	2C	C201	6A
IC202	6C	C203	6B
Q201	8C	C204	8C
Q202	1D	C205	8C
Q203	8A	C206	2B
Q205	7A	C207	8A
Q207	7A	C208	7A
Q210	7B	C209	2C
Q211	8C	C210	7A
Q214	2B	C211	7B
Q215	2B	C212	2C
D201	8B	C213	7B
D202	1C	C214	7B
D203	8B	C215	7B
D204	7B	C216	2D
D205	2B	C217	8B
D208	3C	C219	3B
L201	6A	C220	6B
L202	1C	C221	6B
L203	7B	C222	6B
L204	7B	C224	6B
X201	7B	C225	7C
R201	8C	C226	5B
R202	8B	C227	6B
R203	8B	C228	6C
R204	2C	C230	7C
R206	2C	C231	8D
R207	7B	C232	7C
R209	2C	C235	7E
R210	1C	C236	5B
R212	7B	C238	7E
R213	2D	C239	7D
R214	2D	C241	8E
R216	2C	C242	7D
R217	7C	C245	6B
R218	7C	C246	2D
R219	3A	C247	7E
R220	6B	C253	1C
R221	6C	C254	4B
R222	3B		
R223	6B		
R231	8D		
R232	8D		
R237	3D		
R238	2D		
R239	3B		
R242	2B		
R243	2B		
R244	2E		
R245	2D		
R246	3D		
R247	3C		
R248	3C		
R249	3C		
R250	3C		
R251	3D		
R252	3D		
R253	2E		

■ CIRCUIT BOARD AND WIRING CONNECTION DIAGRAM

B PLL P.C.B. (SIDE: B)

• This circuit board diagram may be modified at any time with the development of new technology.

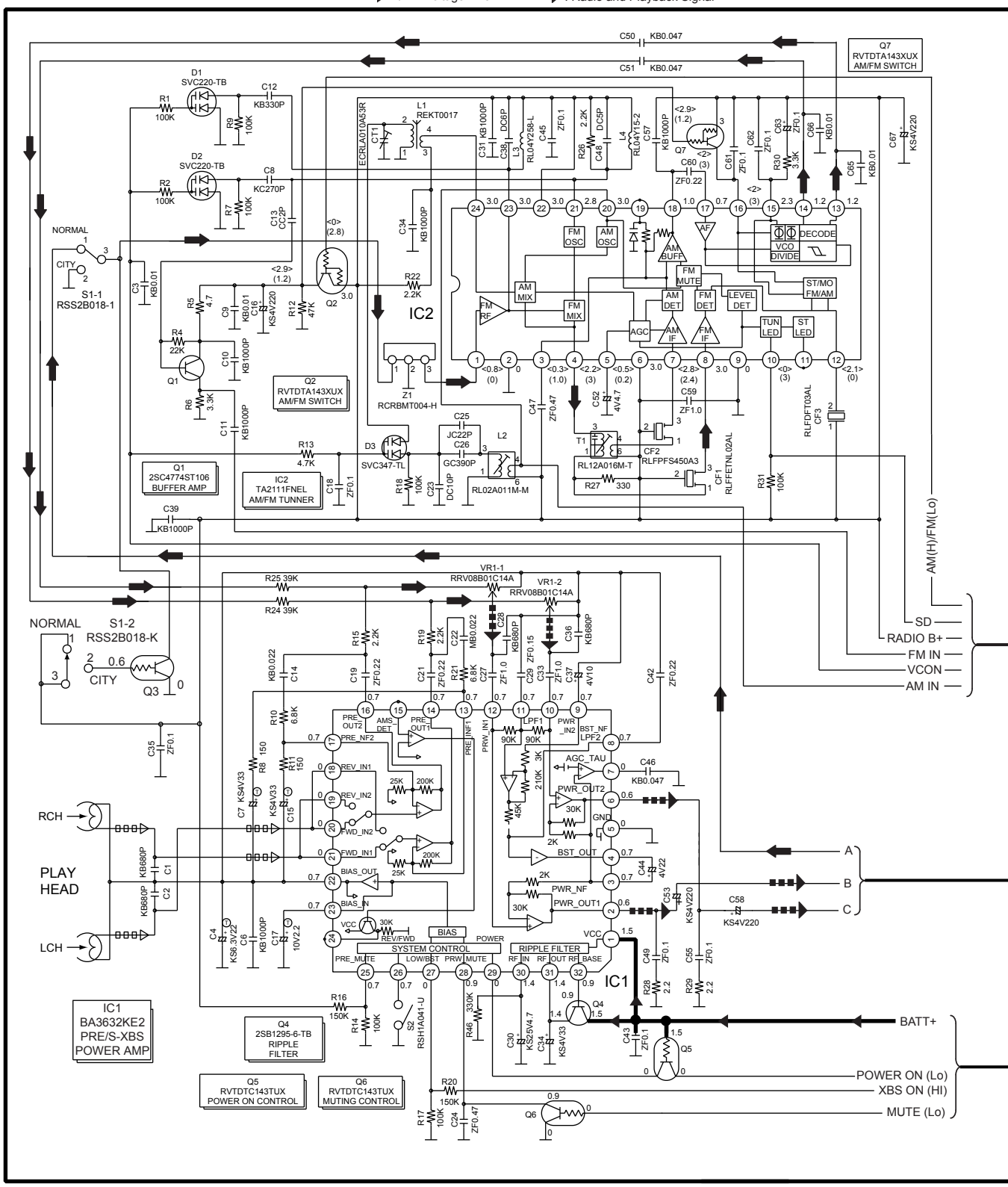


■ ELECTRONIC PARTS LOCATION

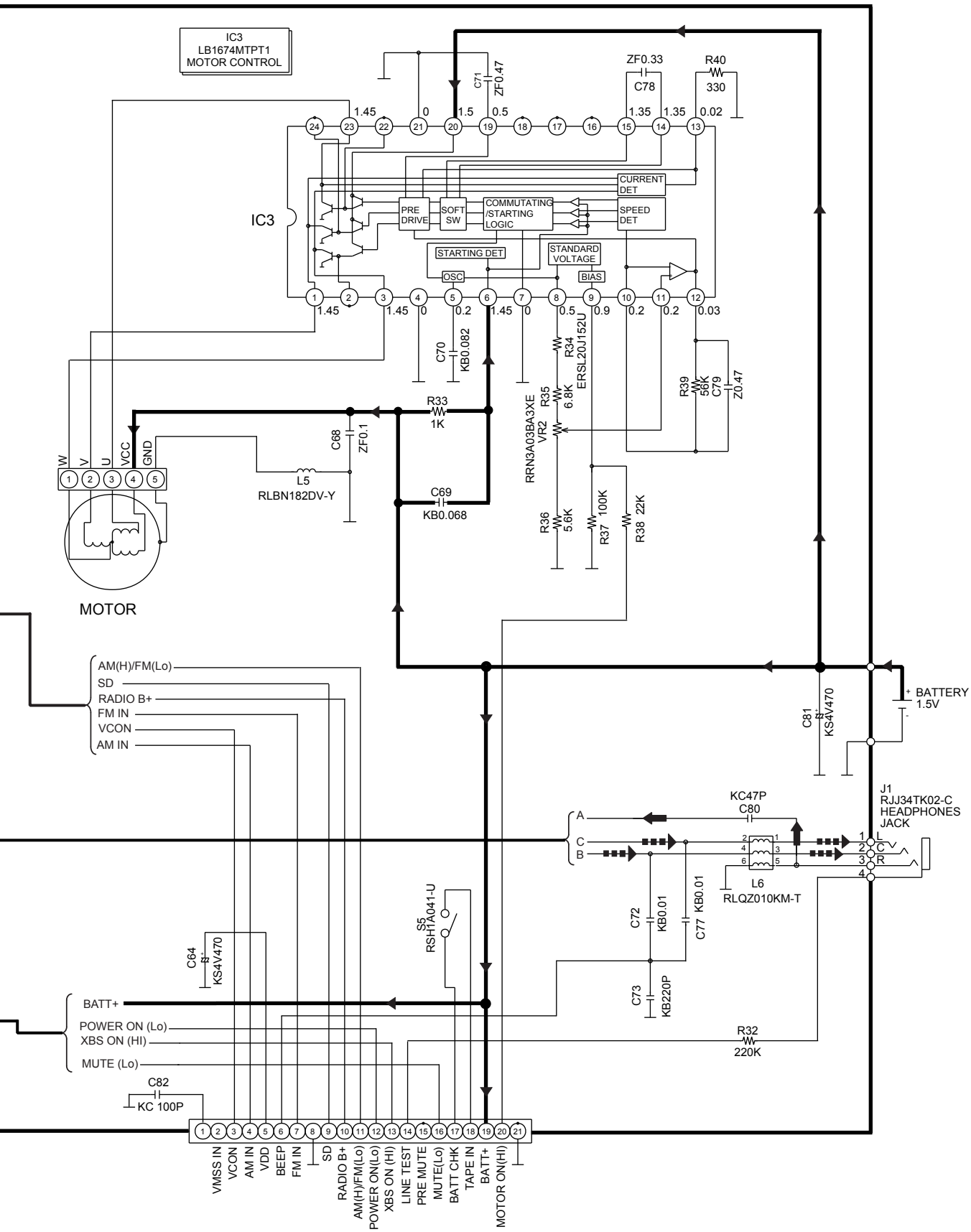
Ref.	Lo.
LCD201	4C
S202	5A
S203	7C
S204	4A
S205	2C
S206	3E
S207	4E
S208	4E
S209	5E
S210	6E
S211	6C
S212	6D

SCHEMATIC DIAGRAM-1 (MAIN CIRCUIT)

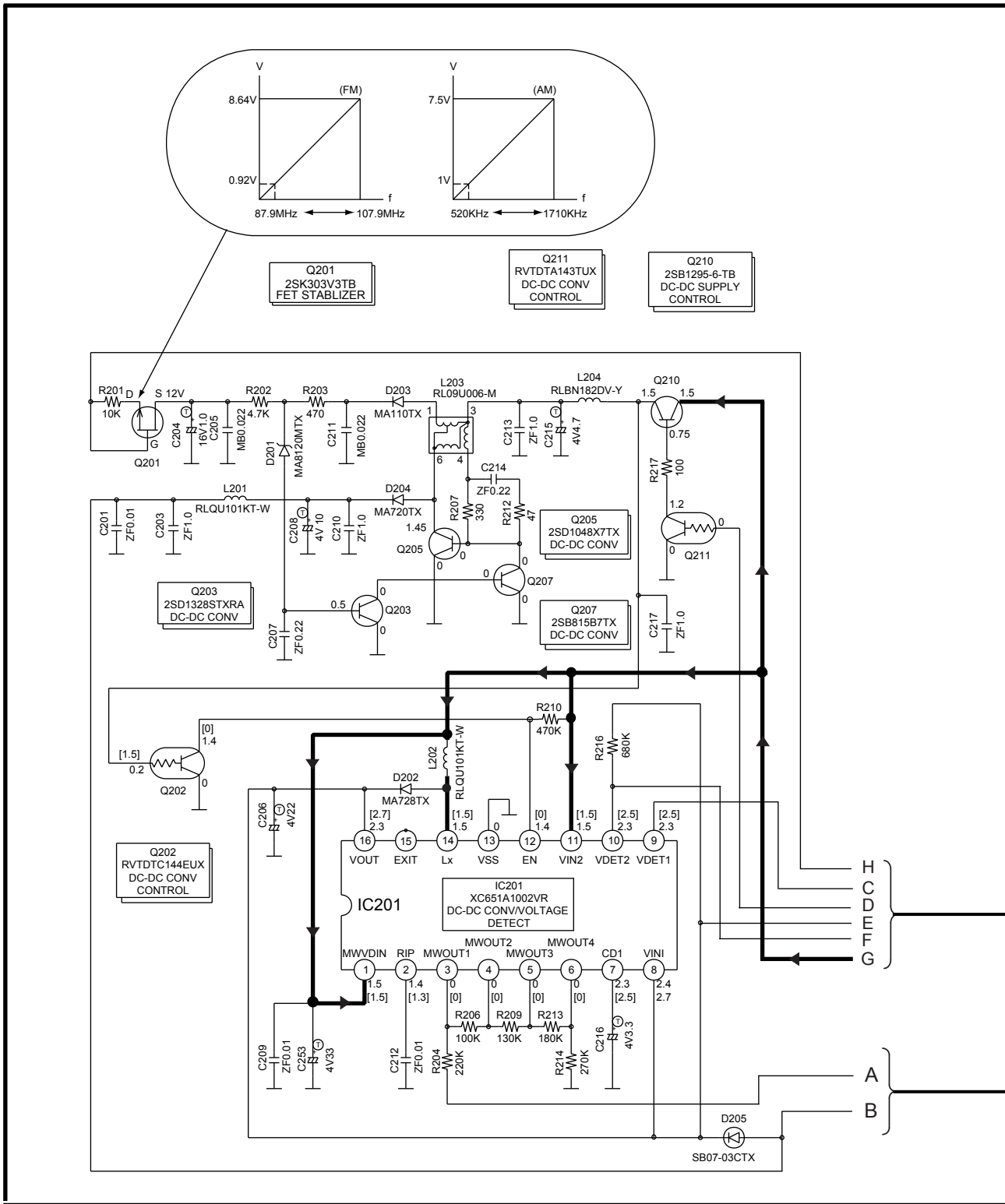
: FM Signal
: + B Voltage Line
: Playback Signal
: Radio and Playback Signal



SCHEMATIC DIAGRAM-2 (MAIN CIRCUIT) : + B Voltage Line : FM Signal : Radio and Playback Signal



SCHEMATIC DIAGRAM-3 (LCD CIRCUIT) : + B Voltage Line



SCHEMATIC DIAGRAM-4 (LCD CIRCUIT) → : + B Voltage Line